FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR MANAGEMENT

KS Bearings, Inc.
West State Road 46
Greensburg, Indiana 47240

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 and 326 IAC 2-1-3.2, as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F031-7991-00002	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: June 24, 1997
First Significant FESOP Modification/ENSR: SMF/ENSR 031-10147-00002	Pages Affected: 1, 2, 3, 4, 5, 6, 7, 18, 25, 26, 27, 28, 29, 30 Added Pages : 7a, 27a, 27b, and 32a thru 32g
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

This permit is based on information presented in the permit application and any information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM)and submitted to IDEM, OAM.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary bearings manufacturing plant.

Responsible Official:	John Pennington
Source Address:	West State Road 46, Greensburg, Indiana 47240
Mailing Address:	West State Road 46, Greensburg, Indiana 47240
SIC Code:	3714
County Location:	Decatur County
County Status:	Attainment for all criteria pollutants
Source Status:	FESOP PSD Minor Source

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(1) The Cast Bronze Strip (CBS) Line consisting of the following:

(a) One (1) cold start furnace, PT #6, with a maximum capacity of 0.75 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(b) Three (3) holding furnaces, PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour. PT #7 is controlled by the CBS baghouse, and exhausts to stack #8.

(c) Two (2) on-line melting furnaces, PT #2 and PT #4, each with a maximum capacity of 1.65 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(d) One (1) skiving unit to remove alloy from the metal, PT 18, with emissions controlled by the CBS cyclone/bagfilter, and exhausting to stack #10.

(e) One (1) hot oil quench unit, PT #15, with fugitive emissions.

(f) Two (2) rough milling units, PT #13 with emissions controlled by CBS cyclone/bagfilter, and exhausting to stack #8.

(2) MIBA Line #1, which includes the following operations:

(a) One (1) Aluminum and/or Bronze Electric Induction Furnace, with a maximum capacity of 275 pounds of aluminum alloy per hour (lb/hr) or 600 lb/hr of bronze alloy.

(b) One (1) Centrifugal Casting machine #1, which has a maximum capacity of 275 lb/hr of molten aluminum or 600 lb/hr of molten bronze.

(c) Two (2) Static Casting machine #1 and #2, each has a maximum capacity of 300 lb/hr of molten bronze.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 275 lb/hr.

(3) MIBA Line #2, which includes the following operations:

(a) One (1) dedicated Bronze Electric Induction Furnace, with a maximum capacity of 600 lb/hr.

(b) One (1) Centrifugal Casting machine #2, which has a maximum capacity of 600 lb/hr of molten bronze.

(c) One (1) Static Casting machine #3, which has a maximum capacity of 600 lb/hr of molten bronze.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 1,200 lb/hr.

(4) One (1) Open Top (Batch) Vapor Degreaser, T-148, with a solvent air interface of 10 square feet area, which is capable of utilizing 6.75 pounds of Perchloethylene per hour. This degreaser is controlled by a Carbon Adsorption System.

(5) The Cu/Pb Powder Line, PT #83, with a maximum capacity of 1,500 pounds per hour of steel strip coated with 600 pounds per hour of Cu/Pb powder, controlled by a baghouse with HEPA filter, and exhausted into the building.

A.3 Insignificant Activities [326 IAC 2-7-1(20)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour. (8.37 MMBtu per hour boiler #1 with no. 2 fuel oil back-up (unit 50), 5.02 MMBtu per hour boiler #2 with no. 2 fuel oil back-up (unit 60), 6.69 MMBtu per hour boiler #3 with no. 2 fuel oil back-up (unit 70), three (3) 0.1 MMBtu per hour oxygen scanvenging flames (units 81, 82, and 16), two (2) pre-ladle heaters #1 and #2 (units 9 and 10)).

(2) Refractory storage not requiring air pollution control equipment.

(3) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(4) Machining where an aqueous cutting coolant continuously floods the machining interface.

(5) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(6) Cleaners and solvents characterized as follows:

(a) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100EF) or;

(b) Having a vapor pressure equal to or less than 0.7 kPA; 5 mm Hg; or 0.1 psi measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(7) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(8) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(9) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.

(10) Quenching operations used with heat treating processes.

(11) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(12) Paved and unpaved roads and parking lots with public access.

(13) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(14) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.

(15) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

(16) A laboratory as defined in 326 IAC 2-7(20)(c).

(17) Other categories with emissions below insignificant thresholds.

(a) Miscellaneous dry machining and deburring operations producing large shavings.

(b) Miscellaneous metal washing operations.

(c) One (1) Aluminum/Bronze Wet Machining Operation, which is rated at 275 lb/ hr of aluminum/bronze.

(d) One (1) Bronze Wet Machining Operation, which is rated at 1,200 lb/hr of bronze.

(e) One (1) Electroplating Operation, which is rated at 6.69 lb/hr of bath solution;

(f) One Babbitting Operation, with a capacity of 80 lb/hr.

(g) Immersion Tin Dip Operation, with a capacity of 275 lb/hr.

(h) Two (2) Rough Dry Mills, each has a capacity of 80 lb/hr.

(i) One (1) Finish Wet Mill, with a capacity of 70 lb/hr.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions Superseded [326 IAC 2]

This permit supersedes the conditions of all construction and operating permits issued to this stationary source under 326 IAC 2 prior to the effective date of this FESOP.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit of any regulated pollutant from the entire source shall not exceed 100 tons per 12-month period. This limitation shall also satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) and 326 IAC 2-7 (Part 70 Permit Program) ;

(2) The potential to emit of hazardous air pollutants (HAPs) from the entire source shall not exceed 10 tons per 12-month period of any individual HAP; and

(3) The potential to emit of any combination of HAPs from the entire source shall not exceed 25 tons per 12-month period of any combination of HAPs.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(20). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

(a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,

(b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2(3).

C.5 Operation of Equipment [326 IAC 2-8-5(a)(4)]

(a) All equipment that may emit pollutants into the ambient air shall be properly operated to meet the requirements of this permit and maintained in accordance with Section B - Preventive Maintenance Plan.

SECTION D.1 FACILITY OPERATION CONDITIONS

(1) The Cast Bronze Strip (CBS) Line consisting of the following:

(a) One (1) cold start furnace, PT #6, with a maximum capacity of 0.75 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(b) Three (3) holding furnaces, PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour. PT #7 is controlled by the CBS baghouse, and exhausts to stack #8.

(c) Two (2) on-line melting furnaces, PT #2 and PT #4, each with a maximum capacity of 1.65 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(d) One (1) skiving unit to remove alloy from the metal, PT 18, with emissions controlled by the CBS cyclone/bagfilter, and exhausting to stack #10.

(e) One (1) hot oil quench unit, PT #15, with fugitive emissions.

(f) Two (2) rough milling units, PT #13 with emissions controlled by CBS cyclone/bagfilter, and exhausting to stack #8.

(2) MIBA Line #1, which includes the following operations:

(a) One (1) Aluminum and/or Bronze Electric Induction Furnace, with a maximum capacity of 275 pounds of aluminum alloy per hour (lb/hr) or 600 lb/hr of bronze alloy.

(b) One (1) Centrifugal Casting machine #1, which has a maximum capacity of 275 lb/hr of molten aluminum or 600 lb/hr of molten bronze.

(c) Two (2) Static Casting machine #1 and #2, each has a maximum capacity of 300 lb/hr of molten bronze.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 275 lb/hr.

(3) MIBA Line #2, which includes the following operations:

(a) One (1) dedicated Bronze Electric Induction Furnace, with a maximum capacity of 600 lb/hr.

(b) One (1) Centrifugal Casting machine #2, which has a maximum capacity of 600 lb/hr of molten bronze.

(c) One (1) Static Casting machine #3, which has a maximum capacity of 600 lb/hr of molten bronze.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 1,200 lb/hr.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.1.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.1.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.1.3 Pursuant to 326 IAC 2-1-9(b) (Revocation of Permits), IDEM, OAM, may revoke this section of the approved permit if construction is not commenced within eighteen (18) months after receipt of this permit or if construction is suspended for a continuous period of one (1) year or more.

D.1.4 All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

D.1.5 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Operation Conditions

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.6 Particulate Matter Less Than Ten Microns (PM10)

The PM10 emissions from the CBS line, MIBA Lines #1 and #2 shall be limited to 9.6 pounds per hour. Compliance with this limit including the limit in Section D.2.1, and the insignificant activities will make 326 IAC 2-7 (Part 70 Permit) not applicable.

D.1.7 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the CBS line, MIBA Lines #1 and #2 shall not exceed 9.6 pounds per hour when operating at a process weight rate of four thousand five hundred (4,500) pounds per hour of bronze and two thousand four hundred (2,400) pounds per hour of steel, and (275) pounds per hour of bronze/aluminum.

The pounds per hour limitation shall be calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission pounds per hour; and
P = process weight rate tons per hour

D.1.8 Pollutant Emissions

Pursuant to the new Rule 326 IAC 2-1.1, any change or modification which may increase any pollutant emissions to a registration level or more from the equipment covered in this FESOP must be approved by the Office of Air Management (OAM) before such change may occur.

Testing Requirements [326 IAC 2-8-4(3)]

D.1.9 Stack Testing

Compliance stack tests shall be performed within 180 days of issuance of this permit, for PM, filterable and condensible PM-10 at the baghouses controlling stacks 8 and 10. These tests shall be performed according to 40 CFR 60, Appendix A. The stack test required under the initial FESOP is not required to be repeated for this modification.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.10 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this process line.

D.1.11 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses controlling the CBS line, at least once daily when the CBS line; MIBA Lines #1 and #2, are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse controlling emissions at stack 8 shall be maintained within the range of 2.0 to 5.0 inches of water and the pressure drop across the baghouse controlling emissions at stack 10 shall be maintained within the range of 0.5 to 4.5 inches of water, or at ranges established during the latest stack tests. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every

six (6) months.

D.1.12 Broken Bag or Failure Detection

That in the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the units have been repaired or replaced.

(b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

D.1.13 Visible Emission Notations

(a) Daily visible emissions notations of the stack 8 and stack 10 exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal.

(b) For processes operated continuously "normal" means those conditions prevailing, or expected to prevail eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.14 Record Keeping Requirements

The Permittee shall maintain records to document compliance with Conditions D.1.6; D.1.7; D.1.11; and D.1.13. These records shall be maintained in accordance with Section C - General Record Keeping Requirements. These records shall include a minimum of the following:

(a) Inlet and outlet differential static pressure;

(b) Pressure reading at which the cleaning is set or triggered;

(c) Visible emission notations.

The following information shall also be recorded as specified:

(d) Documentation of all corrective actions implemented per event.

(e) Operation and preventive maintenance logs, including work purchases orders shall be maintained.

(f) Quality Assurance and Quality Control (QA/QC) procedures shall be maintained.

(g) Operator Standard Operating Procedures (SOPs) shall be maintained.

(h) Manufacturer's specifications or its equivalent shall be maintained.

(i) Equipment "troubleshooting" contingency plan shall be maintained.

D.1.15 Reporting Requirements

Information to document compliance with Conditions D.1.6; D.1.7; D.1.11; and D.1.13 shall be submitted upon request to the address listed in Section C - General Reporting Requirements.

SECTION D.2 FACILITY OPERATION CONDITIONS

The Cu/Pb Powder Line, PT #83, with a maximum capacity of 1,500 pounds per hour of steel strip coated with 600 pounds per hour of Cu/Pb powder, controlled by a baghouse with HEPA filter, and exhausted into the building.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Matter Less Than Ten Microns (PM10)

The PM10 emissions from the Cu/Pb Powder Line shall be limited to 4.2 pounds per hour. Compliance with this limit including the limit in Section D.1.6, and the insignificant activities will make 326 IAC 2-7 (Part 70 Permit) not applicable.

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the Cu/Pb Powder Line shall not exceed 4.23 pounds per hour when operating at a process weight rate of one thousand five hundred (1500) pounds per hour of steel and six hundred (600) pounds per hour of powder.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission pounds per hour; and
P = process weight rate tons per hour

Testing Requirements [326 IAC 2-8-4(3)]

D.2.3 Particulate Matter (PM)

Compliance testing shall be conducted at the Powder Line baghouse for PM, filterable and condensible PM-10 within 180 days after issuance of this permit. The Permittee shall perform the tests specified in this permit to demonstrate compliance with the applicable rule or permit condition. The stack test required under the initial FESOP is not required to be repeated for this modification.

D.2.4 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Cu/Pb Powder Line when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.2.5 Broken Bag or Failure Detection

That in the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the units have been repaired or replaced.

(b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.6 Record Keeping Requirements

The Permittee shall maintain records to document compliance with Conditions D.2.1. and D.2.4. These records shall be maintained in accordance with Section C - General Record Keeping Requirements. The following information shall be recorded as specified:

(a) Documentation of all bag failure, repaired and/or replaced made per event.

(b) To document compliance with Condition D.2.3, the Permittee shall maintain records of the

results of the inspections required under Condition D.2.3 and the dates the vents are redirected.

(c) Operator Standard Operating Procedures (SOPs) shall be maintained.

(d) Manufacturer's specifications or its equivalent shall be maintained.

(e) Equipment "troubleshooting" contingency plan shall be maintained.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.7 Reporting Requirements

Information to document compliance with conditions D.2.4 and D.2.5 shall be submitted upon request, to the address listed in Section C - General Reporting Requirements.

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Section 4.1 FACILITY OPERATION CONDITIONS

(4)	One (1) Open Top (Batch) Vapor Degreaser, T-148, with a solvent air interface of 10 square feet area, which is capable of utilizing 6.75 pounds of Perchloethylene per hour. This degreaser is controlled by a Carbon Adsorption System.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.4.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.4.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.4.3 Pursuant to 326 IAC 2-1-9(b) (Revocation of Permits), IDEM, OAM, may revoke this section of the approved permit if construction is not commenced within eighteen (18) months after receipt of this permit or if construction is suspended for a continuous period of one (1) year or more.

D.4.4 All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

D.4.5 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any

permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.6 General provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart T.

D.4.7 Halogenated Solvent Cleaning NESHAP [326 IAC 20-6-1][40 CFR Part 63, Subpart T]

This facility is subject to 40 CFR Part 63, Subpart T, which is incorporated by reference as 326 IAC 20-6-1. A copy of the rule is attached.

D.4.8 Halogenated Solvent Cleaning NESHAP [40 CFR Part 63.463, Subpart T]

The Batch Type Vapor Degreaser, T-148, shall conform to the following design requirements:

(a) An idling and downtime mode cover shall be in place that may be readily opened or closed, that completely covers the cleaning machine openings when in place, unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires covers to not be in place. The cover shall be free of cracks, holes, and other defects.

(b) The Vapor Degreaser shall have a freeboard ratio of 0.75 or greater.

(c) It shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

(d) It shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

(e) It shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(f) It shall have a primary condenser.

(g) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the following requirements:

The concentration of organic solvent in the exhaust from this device shall not exceed 100 parts per million of any halogenated HAP compounds. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

D.4.9 Control Combination for Batch Vapor Cleaning Machines

The Vapor Degreaser T-148 shall be employed with a control combination of a Freeboard

Refrigeration device and a Carbon Adsorber.

D.4.10 Halogenated Solvent Cleaning NESHAP [40 CFR Part 63.463, Subpart T

The following work and operational practice requirements for the Batch Type Vapor Degreaser, T-148, shall also be applicable:

(a) Control air disturbances across the cleaning machine openings by incorporating the control equipment or the following techniques:

(1) Cover shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover to not be in place.

(b) The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50% of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

(c) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).

(d) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the OAM.

(e) Parts baskets or parts shall not be removed from any solvent cleaning machine, the primary condenser shall be turned on before the sump heater.

(f) During startup of the vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(g) During shutdown of the vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(h) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(i) The solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturer of the equipment or using alternative maintenance practices that have been demonstrated to the OAM's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(j) The Operator of the solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning operating procedures in Appendix B to this part if requested during an inspection by the OAM.

(k) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(l) Sponges, fabric, wood and paper products shall not be cleaned.

D.4.11 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility.

Compliance Determination Requirements

D.4.12 Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

(1) The Permittee shall conduct monitoring of each control device that is used to comply with § 63.463 as provided in the Monitoring Procedures in § 63.466:

(a) The Permittee shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent (%) of the solvent's boiling point.

(b) When using a carbon adsorber in conjunction with a lip exhaust, the Permittee shall:

(i) ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in § 63.466(e). If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the Permittee shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

(ii) ensure that the carbon adsorber bed is not bypassed during desorption.

(iii) ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.

(2) An exceedance has occurred if the above requirements in item (1) of this condition have not been met and are not corrected within 15 days of detection. Adjustment or repairs shall be made to the solvent cleaning system or control device to reestablish required levels.

D.4.13 Monitoring Procedures

(a) The Permittee shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraph(s) below:

(1) The Permittee shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket of the freeboard refrigeration device, during the idling mode.

(2) The Permittee shall measure and record the concentration of the halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined using the procedure specified below:

(a) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of ± 25 parts per million by volume.

(b) Use the colorimetric detector tube according to the manufacturer's instructions.

(c) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other outlet; and 2 stack or duct diameters upstream from any flow disturbance such as bend, expansion, contraction, inlet or outlet.

D.4.14 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]

The Permittee is not required to test this facility by this permit or by 40 CFR § 63.465, Test Methods, However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance.

Recordkeeping and Reporting Requirements

D.4.15 Recordkeeping Requirements [326 IAC 2-8-4(3)]

(a) The Permittee shall maintain, in written or electronic form, records of the following information specified below, for the life time of the machine,

(1) Owners's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

(2) The date of installation of the solvent cleaning machine and all of its control devices. If the exact date of the installation is not known, a letter certifying that the cleaning machine and its control devices were installed after November 29, 1993, may be substituted.

(b) The Permittee shall maintain, in written or electronic form, records of the following information specified below for a period of 5 years:

(1) The results of control device monitoring required under § 63.466.

(2) Information on the actions taken to comply with § 63.463(e). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(3) Estimates of annual solvent consumption for the solvent cleaning machine.

(4) If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466.

(5) The Permittee shall record the date and results of the control devices weekly monitoring required under Condition D.4.12.

(6) The Permittee or Operator shall record all exceedances and all corrections and adjustments made to avoid exceedances as mentioned in Condition D.4.12.

D.4.16 Reporting Requirements [326 IAC 2-8-4(3)]

A summary of the information to document compliance with D.4.12 this permit, and to the following

address:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(a) Submit an initial notification report immediately. The report shall include the following information:

(1) The name and address of the owner or operator.

(2) The address of the solvent cleaning machine.

(3) A brief description of each solvent cleaning machine including machine type, solvent/air interface area, and existing controls.

(4) The date of installation for the solvent cleaning machine.

(5) The anticipated compliance approach for the solvent cleaning machine.

(6) An estimated annual halogenated HAP solvent consumption for the solvent cleaning machine.

(b) Submit an initial statement of compliance for the solvent cleaning machine no later than 150 days after the start up date. This statement shall include:

(1) The name and the address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A list of the control equipment used to achieve compliance for solvent cleaning machine.

(4) For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.

(5) The date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466(e).

(c) The Permittee shall submit an annual report by February 1 of each year following the one for which the reporting is being made. This report shall include the requirements as follows:

(1) A signed statement from the facility owner or his designee stating that , “All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass

the test required in § 63.463(d)(10)."

(2) An estimate of solvent consumption for each solvent cleaning machine during the reporting period.

(d) The Permittee shall submit an exceedance report to the commissioner semiannually except when, the commissioner determines, on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the Permittee shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph § 63.468 (i) of this section is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calender half or quarter, as appropriate. The exceedance report shall include the applicable information as given below:

(1) Information on the actions taken to comply with § 63. 463(e). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.

(3) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(e) That pursuant to § 63.463 (i), the Permittee who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the following conditions are met:

(1) The source has demonstrated a full year of compliance without an exceedance.

(2) The Permittee continues to comply with all relevant recordkeeping and monitoring requirements specified in Subpart A (General Provisions) and in 40 CFR 63, Subpart T

(3) The commissioner does not object to a reduced frequency of reporting for the affected source as provided in paragraphs (e)(3)(iii) of Subpart A (General Provisions) of 40 CFR 63.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Significant FESOP Modification and Enhanced New Source Review (ENSR)

Source Background And Description

Source Name:	KS Bearings, Inc.
Source Location:	West State Road 46, Greensburg, Indiana 47240
County:	Decatur
FESOP No.:	F-031-7991-00002 Issued Date: June 24, 1997
Amendment No.:	SMF/ENSR-031-10147-00002
SIC Code:	3714
Permit Reviewer:	Aida P. De Guzman

The Office of Air Management (OAM) has reviewed an application for a significant modification to the FESOP F-031-7991-00002 issued on June 24, 1997 for KS Bearings, Inc.. The modification involves the construction and operation of the following new equipment used in the manufacture of bearings:

(1) MIBA Line #1, which includes the following operations:

(a) One (1) Aluminum and/or Bronze Electric Induction Furnace, with a maximum capacity of 275 pounds of metal alloy per hour (lb/hr);

(b) One (1) Centrifugal Casting machine #1, which has a maximum capacity of 275 lb/hr of molten metal;

(c) Two (2) Static Casting machine #1 and #2, each has a maximum capacity of 137.5 lb/hr of molten metal; and

(d) One (1) Shakeout Hopper, which has a maximum capacity of 275 lb/hr.

(2) MIBA Line #2, which includes the following operations:

(a) One (1) dedicated Bronze Electric Induction Furnace, with a maximum capacity of 1,200 lb/hr;

(b) One (1) Centrifugal Casting machine #2, which has a maximum capacity of 1,200 lb/hr of molten metal;

(c) One (1) Static Casting machine #3, which has a maximum capacity of 1,200 lb/hr os molten metal;

(d) One (1) Shakeout Hopper, which has a maximum capacity of 1,200 lb/hr.

(3) One (1) Open Top (Batch) Vapor Degreaser, T-148, with a solvent air interface of 10 square feet area, which is capable of utilizing 6.75 pounds of Perchloethylene per hour. This degreaser is controlled by a Carbon Adsorption System;

(4) One (1) Aluminum/Bronze Wet Machining Operation, which is rated at 275 lb/ hr of aluminum/bronze;

(5) One (1) Bronze Wet Machining Operation, which is rated at 1,200 lb/hr of bronze;

(6) One (1) Electroplating Operation, which is rated at 6.69 lb/hr of bath solution;

(7) One Babbitting Operation, with a capacity of 80 lb/hr;

(8) Immersion Tin Dip Operation, with a capacity of 275 lb/hr;

(9) Two (2) Rough Dry Mills, each has a capacity of 80 lb/hr; and

(10) One (1) Finish Wet Mill, with a capacity of 70 lb/hr.

Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on September 16, 1998, and October 20, and 26, 1998.

Emissions Calculations

(a) MIBA Lines #1 and #2:

Facility	Throughput (ton/yr)	Emission Factor (lb/ton)			Baghouse Overall % Control Efficiency	PM Pot'l. UnControlled Emissions (ton/yr)	PM Pot'l. Controlled Emissions (ton/yr)	Lead Pot'l. Emissions (ton/yr)	Lead Pot'l. Controlled Emissions (ton/yr
		PM Uncontrolled	PM Controlled	Lead					
Furnace									

Bronze/ Aluminum	1,205	0.9	0.2	0.1	95%	0.54	0.1205	0.06	0.003
Bronze	5,256	0.9	0.2	0.1	95%	2.4	0.5256	0.26	0.013
Pouring and Cooling									
Bronze/ Aluminum	1,205	4.2		0.5		2.5		0.304	0.304
Bronze	5,256	4.2		0.5		11.0		1.3	1.3
Shakeout									
Bronze/ Aluminum	1,205	3.2			86.4%	1.93	0.262		
Bronze	5,256	3.2			86.4%	8.4	1.14		
Babbitting									
Bronze/ Aluminum	1,205	0.9				0.54			
Total						27.31	2.05	1.924	1.62

Note: PM is assumed to be the same as PM10.

(b) Degreaser:
This operation is controlled by a carbon adsorption system, with a 97% control efficiency and 100% capture.

Uncontrolled VOC Emissions = 6.75 lb/hr * 100% VOC by wt. * 8706 hr/yr * ton/2000 lb
= 29.6 tons/yr

Controlled VOC Emissions = 29.6 ton/yr (1-0.97)
= 0.888 ton/yr

(c) Electroplating: This process is controlled by a scrubber, with an overall control efficiency of 95%. Emissions calculations using the following Clement's Vaporization Formula:

$$W = MKAP / RT$$
$$= \frac{36.5 \text{ lb/mol} * 0.006 \text{ ft/sec} * 6.25 \text{ ft}^2 * 1.5 \text{ psia}}{10.73 \text{ psia-ft}^3/^\circ\text{R-mol} * 535 ^\circ\text{R}}$$
= 0.00036 lb/sec * 3600 sec/hr * 8760 hr/yr * ton/2000 lb
= 5.6 ton/yr

Where:

W = Emissions rate, lb/sec
M = Molecular weight, lb/mol
= 36.5 lb/mol

K = Mass transfer coefficient, ft/sec
= 0.006 ft/sec
A = Surface area, ft^2
= 6.25 ft^2
P = Vapor pressure, psia
= 1.5 (per MSDS)
R = Gas constant, psia-$ft^3/^oR$-mol
= 10.73 psia-$ft^3/^oR$-mol
T = Temperature, ^oR
= 535 ^oR

Controlled HCL Emissions = 5.6 ton/yr (1-0.95)
= 0.28 ton/yr

(d) Combustion Emissions:
There are no combustion emissions, because the Induction Furnaces, Heat Treat and Drying Ovens are electrically heated.

(e) Tin Dip Coating Operation:
No VOC is emitted because the raw material used does not contain any volatile organics.

(f) Wet Machining:
There is no PM emission from this operation because it involves a wet process.

(g) Finish Wet Mill:
Based on the Stack Test done on June 19, 1997 for the source on a similar unit, this operation is insignificant. The emission factor based from the test is 11.6 $x10^{-7}$ lb PM/lb, and 6.9 $x10^{-6}$ lb lead/lb metal.

(h) Dry Rough Milling:
Use grinding emission factor of 1.6 lb PM/ton metal, from "An Inventory of Iron Foundry Emissions", Modern Castings, 1971.

Mill 1 and 2 Capacity = 160 lb/hr metal

PM Emissions = 160 lb/hr * ton/2000 lb * 1.6 lb/ton * ton/2000 lb * 8760 hr/yr
= 0.56 ton/yr

New Equipment Summary of Emissions (tons/year)									
Pollutant	Furnaces Uncontrolled Emissions	Furnaces Controlled Emissions	Pouring and Cooling	Electroplating Uncontrolled Emissions	Electroplating Controlled Emissions	Shakeout Uncontrolled emissions	Shakeout Controlled Emissions	Babbitting	Degreasing Uncontrolled Emissions

VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.6	0.888	29.6	0.888
PM/PM10	2.94	0.64	13.5	0.0	0.0	10.33	1.4	0.54	0.0	0.0	27.31	16.08
SO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Worst Single HAP	0.32 lead	0.016 lead	1.6 lead	5.6 HCL	0.28 HCL	0.0	0.0	0.0	29.6 Perchloro-ethylene	0.888 Perchloro-ethylene	29.6 Perchloro-ethylene	0.888
Combined HAPs	0.32 lead	0.016 lead	1.6 lead	5.6 HCL	0.28 HCL	0.0	0.0	0.0	29.6 Perchloro-ethylene	0.888 Perchloro-ethylene	37.12	3.1
Lead	0.32	0.016	1.6 lead								1.92	1.62

The above Table shows that the construction of the new equipment will result in a potential VOC emissions total are greater than 25 tons of VOC per year, the single HAP potential emission are greater than 10 tons per year, and the combination of HAPs potential emissions are greater than 25 tons per year. Therefore, a construction permit is necessary, and will be subject to the provisions of 326 IAC 2-1-3.2, Enhanced New Source Review. The source's issued Federally Enforceable State Operating Permit (FESOP) will require a significant modification to incorporate the Enhanced New Source Review (ENSR).

Changes

Technical Support Document (TSD)

Due to the modification of the source, which involves new equipment construction, the original Technical Support Document is revised to incorporate this modification. The revision is as follows (changes are bolded, and deletion are strike-through for emphasis):

(1) Total Potential Emissions on Page 4 of 12 of the original TSD is revised to incorporate the emissions from the new equipment and read as follows:

Total Potential Emissions

Potential Emissions are defined as "amount of pollutant emitted without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	**Potential** ~~PTE~~ (tons/year)
PM	~~359.25~~ **386.6**
PM-10	~~359.25~~ **386.6**
SO_2	44.7
VOC	~~0.6~~ **30.2**
CO	3.7
NO_x	15.5

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP	**Potential** ~~PTE~~ (tons/year)
Perchloroethylene	**29.6**
HCL	**5.6**
Lead	>10
TOTAL HAPs	>~~10~~ **25**

(2) The Limited Potential To Emit Table is revised to incorporate the new proposed facilities.

Limited Potential To Emit

	Limited PTE (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NOx	Lead
Facilities Exhausting to Stack 8	~~36.2~~ **42.2**	~~36.2~~ **42.2**	0.0	0.0	0.0	0.0	~~0.58~~ **2.19**
Facilities Exhausting to Stack 10			0.0	0.0	0.0	0.0	0.32
Cu/Pb Powder Line	18.55	18.55	0.0	0.0	0.0	0.0	3.1
Degreaser	**0.0**	**0.0**	**0.0**	**0.888 VOC or HAP**	**0.0**	**0.0**	**0.0**
Electroplating	**0.28 HCL**						
*Boiler #1	0.5	0.5	18.6	0.2	1.3	5.2	0.0

*Boiler #2	0.3	0.3	11.2	0.1	0.8	3.1	0.0
*Boiler #3	0.4	0.4	14.9	0.2	1.0	4.2	0.0
*O_2 Scavenging Flames, 81, 82, & 16	0.0	0.0	0.0	0.0	0.0	0.1	0.0
*Ladle Pre-heaters	0.0	0.0	0.0	0.0	0.1	0.3	0.0
*Insignificant Activities	0.3	0.3	0.0	0.1	0.5	2.6	0.0
Total Emissions	~~56.25~~ **62.25**	~~56.25~~ **62.25**	44.7	~~0.6~~ **1.77**	3.7	15.5	**5.6**
Single HAP	**9.0**						
Combined HAPs	**24.0**						

* Considered as insignificant emission units

The facilities exhausting to stack 8 include: two(2) on-line melting furnaces, PT#2 and PT#4, the initial melting furnace, PT#6, three (3) holding furnaces, PT#7, PT#11 and PT#12, and two (2) brushing machines, PT#8, **proposed MIBA Lines #1 and #2 aluminum/bronze and bronze electric induction furnaces, aluminum/bronze shakeout hopper, and the bronze shakeout hopper.**

(3) The Federal Rule Applicability is revised to reflect the new facilities. The new facilities include an halogenated solvent degreaser.

Federal Rule Applicability:

~~There are no National Emission Standards for Hazardous Air Pollutants (326 IAC 20) applicable to this source.~~

National Emissions Standards for Hazardous Air Pollutants:

(a) 40 CFR Part 63.460, Subpart T - National Emission Standards for Halogenated Solvent Cleaning.

The proposed Batch Type Vapor Degreaser, T-148, is subject to this NESHAP, since it is utilizing Perchloroethylene as the cleaning solvent. It shall achieve compliance with this NESHAP immediately upon startup.

The Batch Type Vapor Degreaser, T-148 has a solvent air interface of 4 feet x 2.5 feet, or 10 square feet area, and shall comply with the requirements specified in § 63.463(b)(1)(i) using a Carbon Adsorption System and a Freeboard Refrigeration (Chiller).

Pursuant to Part 63.463, the new Batch Vapor Degreaser T-148, subject to the provisions of this Subpart shall conform to the following design requirements:

(a)(1) The new Batch Vapor Degreaser T-148 shall be designed or operated to meet the control equipment or technique requirements in the following paragraph (a)(1)(i) or (a)(1(ii):

(i) An idling and downtime mode cover shall be in place that may be readily opened or closed, that completely covers the cleaning machine openings when in place, unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires covers to not be in place. The cover shall be free of cracks, holes, and other defects.

(ii) A reduced room drafts that ensure the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time.

(2) The Vapor Degreaser shall have a freeboard ratio of 0.75 or greater.

(3) It shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

(4) It shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

(5) It shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(6) It shall have a primary condenser.

(7) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the following requirements:

The concentration of organic solvent in the exhaust from this device shall not exceed 100 parts per million of any halogenated HAP compounds. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

The source intends to comply with this NESHAP.

(4) The source had been determined in the previous FESOP to be one of the 28 listed sources under 326 IAC 2-2-1, major PSD sources.

On the 1st paragraph of Page 6 of 12 of the original TSD, the Electric Induction On-Line and Holding Furnaces were subject to the New Source Performance Standard, 326 IAC 12 (40 CFR Part 60.132(b), Subpart M - Standards of Performance for Secondary Brass and Bronze Production Plants.

The source is a foundry and is not considered a Secondary Metal Production plant. The plant buys ready to melt ingots and then cast and mold the melted metal into parts being manufactured. The source does not include certain process steps that are typical of a conventional Secondary Metal Production facilities like cleaning, degassing, fluxing, separation of impurities from the metal/pretreatment of metal, refining or smelting. Based on this fact, and the draft Guidance from EPA dated April 6, 1998, KS Bearing, Inc. is not a Secondary Metal Producer and the Electric Induction On-Line and Holding Furnaces in the FESOP should not have been subject to this NSPS. Therefore, this NSPS applicability on page 6 of 12 of the original TSD is deleted as follows:

~~The Electric Induction On-line and Holding Furnaces, are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.132(b), Subpart M). This NSPS requires that no owner or operator subject to this subpart shall discharge or cause the discharge into the atmosphere from any electric furnace, any gases which exhibit ten percent (10%) opacity or greater. This rule is applicable to emissions from stack 8.~~

State Rule Applicability

*(5) Based on the fact that the source is not one of the 28 listed source categories, the threshold level for PSD on lead is 25 tons/year and not 5 tons/yr. Therefore, the 326 IAC 2-2 in the **State Rule Applicability** of the existing TSD page 6 of 12 is revised as follows:*

326 IAC 2-2: Prevention of Significant Deterioration
The source shall be limited to emissions ~~of 4.0 tons per 365 day period for Lead, and 56.25~~ of **62.25** tons per ~~365 day~~ **12 month** period for PM-10, (PM = PM10). ~~The source is one of the PSD listed source categories, but due to~~ **Compliance with** this limit, will make 326 IAC 2-2 (PSD) ~~will~~ not ~~apply~~ **applicable**.

(6) The new potential to emit which incorporates the new proposed facilities' emissions are reflected in the following rule applicability, and is revised as follows:

326 IAC 2-6: Emission Reporting
This source is not subject to 326 IAC 2-6, because the potential to emit of PM-10 ~~when fugitive emissions are added to the allowable~~ **at** ~~56.25~~ **62.25** tons per ~~365 day~~ **12 month** period ~~tons per 365 day period~~ are less than the 100 tons per year, applicability level for this rule.

326 IAC 2-8-4: FESOP
Pursuant to this rule, the amount of PM-10 emitted from this source is limited to ~~56.25 tons per 365 day period~~ **62.25** tons per ~~365 day~~ **12 month** period. KS Bearings, Inc., has accepted limits that require the use of control equipment when particulate matter emitting facilities are in operation, in order to comply with these limits. Therefore, 326 IAC 2-7 (Part 70 rules) do not apply.

(7) The following rule is revised to include the PM allowable emissions from the MIBA Line #1 bronze/aluminum furnace and shakeout hopper with a process weight rate of 275 lbs/hr and the MIBA Line #2 bronze furnace and shakeout hopper with a process weight of 1,200 lbs/hr. These furnaces vent to stack no. 8.

326 IAC 6-3-2: Process Operations
(a) The steel bronzing line, CBS Line, MIBA Line #1 and MIBA Line #2 (emissions from stacks 8 and 10) is subject to this rule which mandates allowable particulate matter emissions according to the following equation:

$E = 4.10\ P^{0.67}$

Where: E = rate of emission (lb/hr)
P = process weight (tons/hr)
= ~~2.85~~ **3.58** t/hr
3,300 lb/hr bronze, ~~and~~ 2,400 lb/hr steel
275 lb/hr bronze/aluminum, and
1,200 lbs/hr bronze

$E = 4.10\ (\text{~~2.017~~ } \mathbf{3.58})^{\mathbf{0.67}} = \text{~~8.27~~ } \mathbf{9.6}$ lbs / hr = ~~36.22~~ **42.2** tons per year

Because the limiting factor for this line is the amount of steel that can be coated (2,400 lb/hr), emissions from the CBS line are controlled to 5.05 tons per year, therefore the source is in compliance with this rule.

The new furnaces are in compliance with this rule, using a baghouse to control their PM emissions less than the allowable.

*(8) Item (b) for opacity limitation in the **Compliance Monitoring** on page 7 of 12 of the original TSD is deleted, since this limit only applies to secondary bronze production plant.*

Compliance Monitoring

1. The steel bronzing line, CBS Line, has applicable compliance monitoring conditions as specified below:

   (a) The total static pressure drop across the cyclone/baghouse exhausting at stack #10, and the baghouse exhausting at stack #8, shall be recorded at least once per day when the units being controlled are in operation.

Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the cyclone/baghouse exhausting at stack #10 shall be maintained within the range of 0.5 to 4.5 inches of water, and the pressure drop across the baghouse exhausting at stack #8 shall be maintained within the range of 2.0 to 5.0 inches of water, or at ranges established during the latest stack test.

~~(b) Daily opacity readings at stack 8 shall be performed daily during daylight hours to determine compliance with the ten percent (10%) opacity limit.~~

(**b** ~~c~~) Daily visible emissions notations at stack 10 shall be performed daily during daylight hours to determine if emissions are "normal" or "abnormal".

(**c** ~~d~~) Performance testing at stack 8 and stack 10 shall be performed within 180 days of issuance of the final permit for Lead, PM and filterable and condensible PM-10 emissions.

These monitoring conditions are necessary because the control equipment for the steel bronzing line **and MIBA Lines #1 and #2** must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), and 326 IAC 2-8 (FESOP). ~~and NSPS Subpart M (Standards of Performance for Secondary Brass and Bronze Production Plants).~~

FESOP Changes Proposed

FESOP Permit

This new construction will result in a Significant Modification to FESOP F031-7991-00002, issued on June 24, 1997 and it will be modified as follows (changes are bolded and deletion are strike-through for emphasis):

(1) Page 5 of 36, Section A.2 Emission Units and Pollution Control Summary, is revised to read as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(1) The Cast Bronze Strip (CBS) Line consisting of the following:

(a) One (1) cold start furnace, PT #6, with a maximum capacity of 0.75 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(b) Three (3) holding furnaces, PT #7, #12, and #11, each with a maximum capacity of 1.65 tons of metal per hour. PT #7 is controlled by the CBS baghouse, and exhausts to stack #8.

(c) Two (2) on-line melting furnaces, PT #2 and PT #4, each with a maximum capacity of 1.65 tons of metal per hour, controlled by the CBS baghouse, and exhausting to stack #8.

(d) One (1) skiving unit to remove alloy from the metal, PT 18, with emissions controlled by the CBS cyclone/bagfilter, and exhausting to stack #10.

(e) One (1) hot oil quench unit, PT #15, with fugitive emissions.

(f) Two (2) rough milling units, PT #13 with emissions controlled by CBS cyclone/bagfilter, and exhausting to stack #8.

(2) MIBA Line #1, which includes the following operations:

(a) One (1) Aluminum and/or Bronze Electric Induction Furnace, with a maximum capacity of 275 pounds of metal alloy per hour (lb/hr).

(b) One (1) Centrifugal Casting machine #1, which has a maximum capacity of 275 lb/hr of molten metal.

(c) Two (2) Static Casting machine #1 and #2, each has a maximum capacity of 137.5 lb/hr of molten metal.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 275 lb/hr.

(3) MIBA Line #2, which includes the following operations:

(a) One (1) dedicated Bronze Electric Induction Furnace, with a maximum capacity of 1,200 lb/hr.

(b) One (1) Centrifugal Casting machine #2, which has a maximum capacity of 1,200 lb/hr of molten metal.

(c) One (1) Static Casting machine #3, which has a maximum capacity of 1,200 lb/hr os molten metal.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 1,200 lb/hr.

(4) One (1) Open Top (Batch) Vapor Degreaser, T-148, with a solvent air interface of 10 square feet area, which is capable of utilizing 6.75 pounds of Perchloethylene per hour.

This degreaser is controlled by a Carbon Adsorption System.

(~~2~~ **5**) The Cu/Pb Powder Line, PT #83, with a maximum capacity of 1,500 pounds per hour of steel strip coated with 600 pounds per hour of Cu/Pb powder, controlled by a baghouse with HEPA filter, and exhausted into the building.

(2) Page 5 of 36 Section A.3 Insignificant Activities of the issued FESOP is revised as follows to include the proposed new equipment that are insignificant in emissions:

A.3 Insignificant Activities [326 IAC 2-7-1(20)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour. (8.37 MMBtu per hour boiler #1 with no. 2 fuel oil back-up (unit 50), 5.02 MMBtu per hour boiler #2 with no. 2 fuel oil back-up (unit 60), 6.69 MMBtu per hour boiler #3 with no. 2 fuel oil back-up (unit 70), three (3) 0.1 MMBtu per hour oxygen scanvenging flames (units 81, 82, and 16), two (2) pre-ladle heaters #1 and #2 (units 9 and 10)).

(2) Refractory storage not requiring air pollution control equipment.

(3) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(4) Machining where an aqueous cutting coolant continuously floods the machining interface.

(5) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(6) Cleaners and solvents characterized as follows:

(a) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100EF) or;

(b) Having a vapor pressure equal to or less than 0.7 kPA; 5 mm Hg; or 0.1 psi measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(7) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(8) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(9) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.

(10) Quenching operations used with heat treating processes.

(11) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(12) Paved and unpaved roads and parking lots with public access.

(13) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(14) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.

(15) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

(16) A laboratory as defined in 326 IAC 2-7(20)(c).

(17) Other categories with emissions below insignificant thresholds.

(a) Miscellaneous dry machining and deburring operations producing large shavings.

(b) Miscellaneous metal washing operations.

(c) One (1) Aluminum/Bronze Wet Machining Operation, which is rated at 275 lb/ hr of aluminum/bronze.

(d) One (1) Bronze Wet Machining Operation, which is rated at 1,200 lb/hr of bronze.

(e) One (1) Electroplating Operation, which is rated at 6.69 lb/hr of bath solution;

(f) One Babbitting Operation, with a capacity of 80 lb/hr.

(g) Immersion Tin Dip Operation, with a capacity of 275 lb/hr.

(h) Two (2) Rough Dry Mills, each has a capacity of 80 lb/hr.

(i) One (1) Finish Wet Mill, with a capacity of 70 lb/hr.

(3) The averaging time for the limits in Condition C.1.1 on page 18 of 36 of the issued FESOP is changed from daily rolling into monthly rolling.

(4) The Section D.1 Table for project description is revised to include the proposed new facilities to be constructed. Also, the following Construction Conditions are added to address this proposed construction. Subsequent conditions are renumbered accordingly:

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.1.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.1.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.1.3 Pursuant to 326 IAC 2-1-9(b) (Revocation of Permits), IDEM, OAM, may revoke this section of the approved permit if construction is not commenced within eighteen (18) months after receipt of this permit or if construction is suspended for a continuous period of one (1) year or more.

D.1.4 All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

D.1.5 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

(5) Condition D.1.1 on page 25 of 36 of the issued FESOP is revised as follows to incorporate the new proposed equipment process weight PM emissions limit and be renumbered D.1.6.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.6 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the steel bronzing line, CBS line, **MIBA Lines #1 and #2** shall not exceed ~~8.27~~ **9.6** pounds per hour when operating at a process weight rate of ~~three~~ four thousand ~~three~~ five hundred (~~3,300~~ **4,500**) pounds per hour of bronze, ~~and~~ two thousand four hundred (2,400) pounds per hour of steel, **and (275) pounds per hour of bronze/aluminum.**

The pounds per hour **PM emissions** limitation ~~was~~ **shall be** calculated ~~with~~ **using** the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$

where E = rate of emission pounds per hour
P = process weight rate tons per hour

(6) The source is not one of the 28 listed sources, contrary to the previous determination in the issued FESOP. The lead emissions PSD threshold of the source will be 25 tons/yr instead of 5 tons/yr. Based on this change, Condition D.1.2 on page 25 of 36 of the issued FESOP is revised as follows and renumbered D.1.7:

~~D.1.2 Lead Emissions~~

~~Pursuant to CP-031-2280, issued on April 27, 1992, lead emissions from stack 8 shall not exceed 0.134 pounds per hour, and lead emissions from stack 10 shall not exceed 0.074 pounds per hour. Compliance with this limit, in conjunction with Condition D.2.2, 326 IAC 2-2 (PSD) will not apply.~~

D.1.7 Pollutant Emissions

Pursuant to the new Rule 326 IAC 2-1.1, any change or modification which may increase any pollutant emissions to a registration level or more from the equipment covered in this FESOP must be approved by the Office of Air Management (OAM) before such change may occur.

(7) Condition D.1.3 Opacity limit on Page 25 of 36 of the issued FESOP, required for the Electric Induction On-Line and Holding Furnaces under the NSPS, 40 CFR Part 60.132(b), Subpart -M will be deleted from the FESOP, since this NESHAP applies only for electric induction furnaces that are located in a secondary metal production plant .

~~D.1.3 Opacity~~

~~Pursuant to CP-031-2280, issued on April 27, 1992, the visible particulate matter (PM) emissions from stack 8, shall not exceed ten percent (10%) opacity. This opacity limit is a requirement of NSPS Subpart M (Standards of Performance for Secondary Brass and Bronze Production Plants).~~

(8) Condition D.1.8 is also deleted , which is the Method no. used to demonstrate compliance with the 10 % opacity in Condition D.1.3 which was deleted.

~~D.1.8 Opacity Readings~~

~~Opacity Readings to show compliance with Condition D.1.3 shall be performed daily during operation, using Method 9 as described in 40 CFR Part 60, Appendix A.~~

(9) D.1.10 Recordkeeping Requirements and Reporting Requirements on page 27 of 36 of the issued FESOP, is revised to delete D.1.2 and D.1.3, which were referenced in both conditions. Recordkeeping Requirements and Reporting Requirements are renumbered D.1.13 and D.1.14 respectively

D.1.13 Record Keeping Requirements

The Permittee shall maintain records to document compliance with Conditions **D.1.6**, ~~D.1.2, D.1.3~~ and **D.1.10.** These records shall be maintained in accordance with Section C - General Record Keeping Requirements. These records shall include a minimum of the following:

(a) Inlet and outlet differential static pressure;

(b) Cleaning cycle: frequency and differential pressure;

~~(c) Opacity readings;~~

(d) Visible emission notations.

The following information shall also be recorded as specified:

(e) Documentation of all corrective actions implemented per event.

(f) Operation and preventive maintenance logs, including work purchases orders shall be maintained.

(g) Quality Assurance and Quality Control (QA/QC) procedures shall be maintained.

(h) Operator Standard Operating Procedures (SOPs) shall be maintained.

(i) Manufacturer's specifications or its equivalent shall be maintained.

(j) Equipment "troubleshooting" contingency plan shall be maintained.

D.1.14 Reporting Requirements

Information to document compliance with Conditions D.1.6 and **D.1.10** shall be submitted upon request to the address listed in Section C - General Reporting Requirements.

(10) Condition D.2.2 for the Powder Line Lead Emissions is deleted, since no limit for lead is required. The source's new threshold for PSD applicability on lead is 25 tons per year . Subsequent conditions are renumbered accordingly.

(11) The following Section D.4.1 is added in the FESOP to address the proposed new vapor degreaser.

Section 4.1 FACILITY OPERATION CONDITIONS

(4)	**One (1) Open Top (Batch) Vapor Degreaser, T-148, with a solvent air interface of 10 square feet area, which is capable of utilizing 6.75 pounds of Perchloethylene per hour. This degreaser is controlled by a Carbon Adsorption System.**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.4.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.4.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.4.3 Pursuant to 326 IAC 2-1-9(b) (Revocation of Permits), IDEM, OAM, may revoke this section of the approved permit if construction is not commenced within eighteen (18) months after receipt of this permit or if construction is suspended for a continuous period of one (1) year or more.

D.4.4 All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

D.4.5 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.6 General provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]
The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart T.

D.4.7 Halogenated Solvent Cleaning NESHAP [326 IAC 20-6-1][40 CFR Part 63, Subpart T]

This facility is subject to 40 CFR Part 63, Subpart T, which is incorporated by reference as 326 IAC 20-6-1. A copy of the rule is attached.

D.4.8 Halogenated Solvent Cleaning NESHAP [40 CFR Part 63.463, Subpart T]

The Batch Type Vapor Degreaser, T-148, shall conform to the following design requirements:

(a) An idling and downtime mode cover shall be in place that may be readily opened or closed, that completely covers the cleaning machine openings when in place, unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires covers to not be in place. The cover shall be free of cracks, holes, and other defects.

(b) The Vapor Degreaser shall have a freeboard ratio of 0.75 or greater.

(c) It shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

(d) It shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

(e) It shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(f) It shall have a primary condenser.

(g) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the following requirements:

The concentration of organic solvent in the exhaust from this device shall not exceed 100 parts per million of any halogenated HAP compounds. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

D.4.9 Control Combination for Batch Vapor and In-Line Cleaning Machines

The Vapor Degreaser T-148 shall be employed with a control combination of a Freeboard Refrigeration device and a Carbon Adsorber.

D.4.10 Halogenated Solvent Cleaning NESHAP [40 CFR Part 63.463, Subpart T

The following work and operational practice requirements for the Batch Type Vapor Degreaser, T-148, shall also be applicable:

(a) Control air disturbances across the cleaning machine openings by incorporating the control equipment or the following techniques:

(1) Cover shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover to not be in place.

(b) The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50% of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

(c) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).

(d) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the OAM.

(e) Parts baskets or parts shall not be removed from any solvent cleaning machine, the primary condenser shall be turned on before the sump heater.

(f) During startup of the vapor cleaning machine, the primary shall be turned on before the sump heater.

(g) During shutdown of the vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(h) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(i) The solvent cleaning machine and associated controls shall be maintained as recommenced by the manufacturer of the equipment or using alternative maintenance practices that have been demonstrated to the OAM's satisfaction to achieve the small or better results as those recommended by the manufacturer.

(j) The Operator of the solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning operating procedures in Appendix B to this part if requested during an inspection by the OAM.

(k) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(l) Sponges, fabric, wood and paper products shall not be cleaned.

D.4.11 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility.

Compliance Determination Requirements

D.4.12 Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

(1) The Permittee shall conduct monitoring of each control device that are used to comply with § 63.463 as provided in the Monitoring Procedures in § 63.466:

(a) The Permittee shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent (%) of the solvent's boiling point.

(b) When using a carbon adsorber in conjunction with a lip exhaust, the Permittee shall:

(i) ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in § 63.466(e). If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the Permittee shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

(ii) ensure that the carbon adsorber bed is not bypassed during desorption.

(iii) ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.

(2) An exceedance has occurred, if the above requirements in item (1) of this condition have not been met and are not corrected within 15 days of detection. Adjustment or repairs shall be made to the solvent cleaning system or control device to reestablish required levels.

D.4.13 Monitoring Procedures

(a) The Permittee shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraph(s) below:

(1) The Permittee shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket of the freeboard refrigeration device, during the idling mode.

(2) The Permittee shall measure and records the concentration of the halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber.
The exhaust concentration shall be determined using the procedure specified below:

(a) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of ± 25 parts per million by volume.

(b) Use the colorimetric detector tube according to the manufacturer's instructions.

(c) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other outlet; and 2 stack or duct diameters upstream from any flow disturbance such as bend, expansion, contraction, inlet or outlet.

D.4.14 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]

The Permittee is not required to test this facility by this permit or by 40 CFR § 63.465, Test Methods, However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance.

Recordkeeping and Reporting Requirements

D.4.15 Recordkeeping Requirements [326 IAC 2-8-4(3)]

(a) The Permittee shall maintain, in written or electronic form, records of the following information specified below, for the life time of the machine,

(1) Owners's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

(2) The date of installation of the solvent cleaning machine and all of its control devices. If the exact date of the installation is not known, a letter certifying that the cleaning machine and its control devices were installed after November 29, 1993, may be substituted.

(b) The Permittee shall maintain, in written or electronic form, records of the following information specified below for a period of 5 years:

(1) The results of control device monitoring required under § 63.466.

(2) Information on the actions taken to comply with § 63.463(e). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(3) Estimates of annual solvent consumption for the solvent cleaning machine.

(4) If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466.

(5) The Permittee shall record the date and results of the control devices weekly monitoring required under Condition D.4.12.

(6) The Permittee or Operator shall record all exceedances and all corrections and adjustments made to avoid exceedances as mentioned in Condition D.4.12.

D.4.16 Reporting Requirements [326 IAC 2-8-4(3)]

A summary of the information to document compliance with D4.12 this permit, and to the following address:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(a) Submit an initial notification report immediately. The report shall include the following information:

(1) The name and address of the owner or operator.

(2) The address of the solvent cleaning machine.

(3) A brief description of each solvent cleaning machine including machine type, solvent/air interface area, and existing controls.

(4) The date of installation for the solvent cleaning machine.

(5) The anticipated compliance approach for the solvent cleaning machine.

(6) An estimated annual halogenated HAP solvent consumption for the solvent cleaning machine.

(b) Submit an initial statement of compliance for the solvent cleaning machine no later than 150 days after the start up date. This statement shall include:

(1) The name and the address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A list of the control equipment used to achieve compliance for solvent cleaning machine.

(4) For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.

(5) The date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466(e).

(c) The Permittee shall submit an annual report by February 1 of each year following the one for which the reporting is being made. This report shall include the requirements as follows:

(1) A signed statement from the facility owner or his designee stating that , "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in § 63.463(d)(10)."

(2) An estimate of solvent consumption for each solvent cleaning machine during the reporting period.

(d) The Permittee shall submit an exceedance report to the commissioner semiannually except when, the commissioner determines, on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the Permittee shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph § 63.468 (i) of this section is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calender half or quarter, as appropriate. The exceedance report shall include the applicable information as given below:

(1) Information on the actions taken to comply with § 63. 463(e). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.

(3) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(e) That pursuant to § 63.463 (i), the Permittee who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the following conditions are met:

(1) The source has demonstrated a full year of compliance without an exceedance.

(2) The Permittee continues to comply with all relevant recordkeeping and monitoring requirements specified in Subpart A (General Provisions) and in 40 CFR 63, Subpart T

(3) The commissioner does not object to a reduced frequency of reporting for the affected source as provided in paragraphs (e)(3)(iii) of Subpart A (General Provisions) of 40 CFR 63.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Significant Federally Enforceable State Operating Permit (FESOP) Modification and Enhanced New Source Review

KS Bearings, Inc.
West State Road 46
Greensburg, Indiana 47240

SMF/ENSR -031-10147 Plt ID-031-00002

On December 3, 1998, the Office of Air Management (OAM) had a notice published in the Greensburg Daily News, Greensburg, Indiana, stating that KS Bearings, Inc. had applied for a Significant Modification to the issued FESOP in order to construct and operate the new MIBA Lines #1 and #2.

On December 23, 1998 KS Bearings, Inc. has submitted comments on the proposed Significant FESOP Modification and ENSR. The timeclock has been suspended while the source is reviewing OAM's response to the comments that are in the TSD Addendum. The summary of the source's comments is as follows (changes are bolded and deletion are strike-through for emphasis):

Comment 1:

Michael W, Holland who was named as the Responsible Official in the issued FESOP, and whose name was carried over in this Significant FESOP Modification /ENSR should be changed to John Pennington.

Response 1:

The Responsible Official in the Significant FESOP Modification /ENSR was changed to John Pennington.

Comment 2:

Section A.2 Emission Units and Control Equipment Summary on Page 5 of 36 of the issued FESOP, Section D.1 project description table on Page 25 of 36 of the issued FESOP and the Technical Support Document for the Significant FESOP Modification/ENSR should be revised to accurately reflect the operation and capacities of the units involved.

Response 2:

The rated capacities of the proposed equipment listed in Section A.2, Items (2) and (3) Emission Units and Control Equipment Summary on Page 5 of 36 of the issued FESOP, Section D.1 project description table on Page 25 of 36 of the issued FESOP and the Technical Support Document for the Significant FESOP Modification/ENSR were based on the data submitted in the application. The proposed Significant FESOP Modification/ENSR was revised to incorporate these new data. A re-calculation of the pollutants emissions was also made. The revision is as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(2) MIBA Line #1, which includes the following operations:

(a) One (1) Aluminum and/or Bronze Electric Induction Furnace, with a maximum capacity of 275 pounds of ~~metal~~ **aluminum** alloy per hour (lb/hr) **or 600 lb/hr of bronze alloy**.

(b) One (1) Centrifugal Casting machine #1, which has a maximum capacity of 275 lb/hr of molten ~~metal~~ **aluminum or 600 lb/hr of molten bronze**.

(c) Two (2) Static Casting machine #1 and #2, each has a maximum capacity of ~~137.5~~ **300** lb/hr of molten ~~metal .~~ **bronze**.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 275 lb/hr.

(3) MIBA Line #2, which includes the following operations:

(a) One (1) dedicated Bronze Electric Induction Furnace, with a maximum capacity of ~~1,200~~ **600** lb/hr.

(b) One (1) Centrifugal Casting machine #2, which has a maximum capacity of ~~1,200~~ **600** lb/hr of molten ~~metal~~ **bronze**.

(c) One (1) Static Casting machine #3, which has a maximum capacity of ~~1,200~~ **600** lb/hr of molten ~~metal~~ **bronze**.

(d) One (1) Shakeout Hopper, which has a maximum capacity of 1,200 lb/hr.

These equipment changes were also reflected in Section D.1 project description table.

Changes

Technical Support Document (TSD)

(1) *The following emissions calculation was also done using the new data:*

Emissions Calculations

(a) MIBA Lines #1 and #2:

Facility	Throughput (ton/yr)	Emission Factor (lb/ton)			Baghouse Overall % Control Efficiency	PM/PM10 Pot'l. Uncontrolled Emissions (ton/yr)	PM/PM10 Pot'l. Controlled Emissions (ton/yr)	Lead Pot'l. Emissions (ton/yr)	Lead Pot'l. Controlled Emissions (ton/yr
		PM Uncontrolled	PM Controlled	Lead					
Furnace									
MIBA Line #1 Bronze/ Aluminum	~~1,205~~ **2,628**	0.9	0.2	0.1	95%	~~0.54~~ **1.2**	~~0.1205~~ **0.26**	~~0.06~~ **0.13**	~~0.003~~ **0.01**
MIBA Line #2 Bronze	~~5,256~~ **2,628**	0.9	0.2	0.1	95%	~~2.4~~ **1.2**	~~0.5256~~ **0.26**	~~0.26~~ **0.13**	~~0.013~~ **0.01**
Pouring and Cooling									
MIBA Line #1 Centrifugal Cast #1 (Bronze/ Aluminum)	~~1,205~~ **2,628**	4.2		0.5		~~2.5~~ **5.5**	**5.5**	~~0.304~~ **0.66**	~~0.304~~ **0.66**
MIBA Line #1 Static Cast #1 & #2 Bronze	~~5,256~~ **2,628**	4.2		0.5		~~11.0~~ **5.5**	**5.5**	~~1.3~~ **0.66**	~~1.3~~ **0.66**
MIBA Line #2 Centrifugal Cast #2 (Bronze)	**2,628**	**4.2**		**0.5**		**5.5**	**5.5**	**0.66**	**0.66**
MIBA Line #2 Static Cast #3 (Bronze)	**2,628**	**4.2**		**0.5**		**5.5**	**5.5**	**0.66**	**0.66**
Shakeout									
Bronze/ Aluminum	1,205	3.2			86.4%	1.93	0.262		
Bronze	5,256	3.2			86.4%	8.4	1.14		
Babbitting									
Bronze/ Aluminum	1,205	0.9				0.54	**0.54**		
Total						~~27.31~~ **35.27**	~~2.05~~ **24.5**	~~1.924~~ **2.63**	~~1.62~~ **2.66**

Note: PM is assumed to be the same as PM10.

(2) *Emission calculations from the rest of the processes remain the same.*

(3) The New Equipment Summary of Emissions' Table on Page 5 of 27 of the Significant FESOP Modification's TSD is revised to reflect the new emissions from the above table as follows:

New Equipment Summary of Emissions (tons/year)												
Pollutant	*Furnaces Uncontrolled Emissions*	*Furnaces Controlled Emissions*	*Pouring and Cooling*	*Electroplating Uncontrolled Emissions*	*Electroplating Controlled Emissions*	*Shakeout Uncontrolled emissions*	*Shakeout Controlled Emissions*	*Babbitting Uncontrolled /Controlled*	*Degreasing Uncontrolled Emissions*	*Degreasing Controlled Emissions*	*Total Uncontrolled Emissions*	*Total Controlled Emissions*
VOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.6	0.89	29.6	0.89
PM/PM10	~~2.94~~ **2.4**	~~0.64~~ **0.52**	~~13.5~~ **22.0**	0.0	0.0	10.33	1.4	0.54	0.0	0.0	**35.27**	~~16.08~~ **24.5**
SO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Worst Single HAP	0.32 lead	0.016 lead	1.6 lead	5.6 HCL	0.28 HCL	0.0	0.0	0.0	29.6 Perchloro-ethylene	0.89 Perchloro-ethylene	29.6 Perchloro-ethylene	0.89
Combined HAPs	0.32 lead	0.016 lead	1.6 lead	5.6 HCL	0.28 HCL	0.0	0.0	0.0	29.6 Perchloro-ethylene	0.89 Perchloro-ethylene	37.12	2.8
Lead	0.32	0.016	1.6 lead								1.92	1.62

(4) The new rated capacities for the proposed equipment resulted in an slight increase in the emissions. Therefore, the **Total Potential Emissions** section on page 6 of 27 of the Significant Modification's TSD was revised to reflect these changes as follows:

Total Potential Emissions

Pollutant	**Potential** ~~PTE~~ (tons/year)
PM	~~359.25~~ ~~386.6~~ **217.3**
PM-10	~~359.25~~ ~~386.6~~ **217.3**
SO_2	44.7
VOC	~~0.6~~ **30.2**
CO	3.7
NO_x	15.5

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP	**Potential** ~~PTE~~ (tons/year)
Perchloroethylene	**29.6**
HCL	**5.6**
Lead	~~>10~~ **2.9**
TOTAL HAPs	< ~~10~~ **25**

(5) The above changes did not result in any new applicable requirements.

Comment 3:

Condition D1.6 Particulate Matter (PM) on Page 27 of 36 of the issued FESOP, has a typographical error. The process weight rate of "three thousand three hundred" should be four thousand five hundred to be consistent with 4,500.

Response 3:

Condition D.1.6, now D.1.7 is revised to reflect the correct amount of four thousand five hundred.

Comment 4:

Under Condition D.1.8 Stack Testing on Page 27 of 36 of the FESOP Significant Modification, KS Bearings has already provided IDEM/OAM with emission test results performed in July, 1997 and December 1997. This should be noted in the Significant Modification Technical Support Document, under Compliance Monitoring.

Response 4:

The enforceable conditions are the conditions in the FESOP and not the TSD. Since the source has already done the stack testing required under Condition D.1.8, now D.1.9, this condition stated that "The stack test required under the initial FESOP is not required to be repeated for this modification". Anyway, this Addendum will include the following statement under Compliance Monitoring, under item 1(c):

Compliance Monitoring

1. (c) © ~~d~~) Performance testing at stack 8 and stack 10 shall be performed within 180 days of issuance of the final permit for ~~Lead~~, PM and filterable and condensible PM-10 emissions.

KS Bearings has already performed the stack tests required in July, 1997 and December, 1997. No stack testing is required to be repeated for this modification.

Comment 5:

The requirement for daily parametric monitoring in Condition D.1.10 on Page 27 of 36 of the issued FESOP is excessive, since emissions data shows that the potential emissions for lead is 5.6 (now 2.9) tons per year. When the effect of the controls is considered, the lead controlled emissions are less than 1 ton per year. Daily monitoring for a small, insignificant source like KS Bearings is contrary to the intent of the FESOP. KS Bearings respectfully requests that the requirement to read the pressure drop reading for both stacks #8 and #10 be decreased to once per month. The source has already a Preventive Maintenance Program in effect which already requires frequent inspection and evaluation of each control device.

Response 5:

This Condition D.1.10, now D.1.11 Parametric Monitoring on Page 27 of 36 of the issued FESOP is one of the three (3) tools required to demonstrate continuous compliance with the 326 IAC 2-8 limit of 99 tons of PM10 per year, and not for lead. These conditions were not deleted in the FESOP. Also frequency of monitoring stays the same. Condition D.1.11 should also state the MIBA Lines #1 and #2, since these lines also vent through the baghouse controlling the CBS line.

Comment 6:

Under Section D.1.12 on page 27a of 36 of the FESOP, KS Bearings respectfully requests that the requirement for daily observation of the exhaust from stack #10 be deleted. We propose once per month reading of the magnahelic pressure differential gauge for monitoring as an alternative. KS Bearings is a small source of lead. The Preventive Maintenance Program includes the checking and calibration of these gauges to ensure that they are functioning properly and accurately.

Response 6:

This Condition D.1.12 on Page 27a of 36 of the FESOP, is now D.1.13. This condition will be modified to include stack #8 to be consistent with condition D.1.10, now D.1.11. See Response 5 for the same reason.

Comment 7:

KS Bearings respectfully requests that Condition D.1.13 (b) and (c) be deleted. There is no other requirement for the observation of the cleaning cycle frequency and differential pressure. The vibrators which clean the baghouses cycle automatically when pressure differential triggers them. Therefore, the operator does not need to observe the gauge or activate the equipment in order for the vibrators to cycle. As requested above the source requests that IDEM/OAM delete the requirement for visible emissions observation and notation.

Response 7:

Since the baghouses are cleaned automatically, Condition D.1.13 (b), now D.1.14 (b) is revised as follows:

D.1.~~13~~ 4(b) ~~Cleaning cycle: frequency~~ **Pressure reading at which cleaning is set or triggered** ~~and differential pressure~~;

The differential pressure is still required to be monitored and recorded to ensure continuous compliance. There are times when baghouses fail and the cleaning cycle is still not triggered although the pressure differential where it was set has already been exceeded.

Comment 8:

KS Bearings has already submitted the July, 1997 and December, 1997 stack testing results for this process required in Condition D.2.2 and other process emission points.

Response 8:

IDEM/OAM has acknowledged that, that is why Condition D.2.2 and other conditions that required stack testing in the initial FESOP, have a statement that stack testing is not required to be repeated in this modification, and these conditions are the ones that are federally enforceable.

Comment 9:

Under Conditions D.2.4 Visible Emission Notations on Page 28 of 36, and D.2.5 Parametric Monitoring on Page 29 of 36 of the FESOP, KS Bearings respectfully requests that these conditions be deleted for the Copper/Lead (Cu/Pb) Line. This process is a very small potential source of lead and PM/PM10 and it is exhausted inside the building, and is equipped with a HEPA filter to control the lead and PM/PM10 emissions. The initial FESOP that was issued on June 24, 1997, determined that this process has the potential PM/PM10 emissions of 203 tons/year. This determination is not correct.

Response 9:

The lead and PM/PM10 emissions from the Copper/Lead (Cu/Pb) Line has been recalculated as follows:

Cu/Pb collected = 15, 288 lb/yr

Uncontrolled PM/PM10 Emissions = 15,288 lb/yr) * $\frac{8{,}760\text{hr/yr}}{2{,}000\text{ hr/yr}}$ * ton/2000 lb
= [(33.4 ton/yr) + (33.4 ton/yr) * (1-.99)]
= 33.4 ton/yr + 0.334 ton/yr
= 33.7 ton/yr

Controlled PM/PM10 Emissions = (33.4 ton/yr) * (1-.99)]
= 0.334 ton/yr

The corrected PM/PM10 emissions from this line was also reflected in the **Total Potential Emission**s table.

The allowable PM emissions is at 4.23 pounds/hr (18.5 ton/yr), pursuant to 326 IAC 6-3.

Based, on the above lower emissions from the Copper/Lead (Cu/Pb) Line, the Compliance Monitoring Requirements determined in the initial FESOP are deleted in this Significant FESOP Modification. Section D.2 is revised as follows (changes are bolded and deletion are strike-through for emphasis):

SECTION D.2 FACILITY OPERATION CONDITIONS

The Copper /Lead (Cu/Pb) Powder Line, PT #83, with a maximum capacity of 1,500 pounds per hour of steel strip coated with 600 pounds per hour of Cu/Pb powder, controlled by a baghouse with HEPA filter, and exhausted into the building.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the Cu/Pb Powder Line shall not exceed 4.23 pounds per hour when operating at a process weight rate of one thousand five hundred (1500) pounds per hour of steel and six hundred (600) pounds per hour of powder.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission pounds per hour; and
P = process weight rate tons per hour

Testing Requirements [326 IAC 2-8-4(3)]

D.2.2 Particulate Matter (PM)

Compliance testing shall be conducted at the Cu/Pb Powder Line baghouse for PM, filterable and condensible PM-10 within 180 days after issuance of this permit. The Permittee shall perform the tests specified in this permit to demonstrate compliance with the applicable rule or permit condition. The stack test required under the initial FESOP is not required to be repeated for this modification.

~~**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**~~

~~D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this process line.~~

~~D.2.4 Visible Emission Notations~~

~~(a) Daily visible emissions notations of the baghouse exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously "normal" means those conditions prevailing, or expected to prevail eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part~~

~~of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

~~(e) The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.~~

~~D.2.5 Parametric Monitoring~~

~~The Permittee shall record the total static pressure drop across the baghouse controlling the Cu/Pb Powder Line, at least once daily when the Cu/Pb Powder Line is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.5 to 4.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.~~

~~The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.~~

D.2.3 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Cu/Pb Powder Line when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

Subsequent condition are renumbered accordingly.

D.2.6**.4** Broken Bag or Failure Detection

That in the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the units have been repaired or replaced.

(b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.5 Record Keeping Requirements

The Permittee shall maintain records to document compliance with Conditions D.2.1. and D.2.4. These records shall be maintained in accordance with Section C - General Record Keeping Requirements. ~~The following operational parameters shall be recorded daily during normal operation:~~

~~(a) Inlet and outlet differential static pressure;~~

~~(b) Pressure reading at which the cleaning is set or triggered;~~

~~(c) Visible emissions notations.~~

The following information shall ~~also~~ be recorded as specified:

~~(d)~~ **(a)** Documentation of all **bag failure, repaired and/or replaced** made per event ~~corrective actions implemented per event.~~

(b) To document compliance with Condition D.2.3, the Permittee shall maintain records of the results of the inspections required under Condition D.2.3 and the dates the vents are redirected.

~~(e) Operation and preventive maintenance logs, including work purchases orders shall be maintained.~~

~~(f) Quality Assurance and Quality Control (QA/QC) procedures shall be maintained.~~

~~(g)~~ **(c)** Operator Standard Operating Procedures (SOPs) shall be maintained.

~~(h)~~ **(d)** Manufacturer's specifications or its equivalent shall be maintained.

~~(i)~~ **(e)** Equipment "troubleshooting" contingency plan shall be maintained.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.~~8~~**.6** Reporting Requirements

Information to document compliance with Conditions D.2.3, and D.2~~.5~~ **4**shall be submitted upon request, to the address listed in Section C - General Reporting Requirements.

Comment 10:

KS Bearings respectfully requests that Condition D.2.7 (b) and (c) be deleted. There is no other requirement for the observation of the cleaning cycle frequency and differential pressure. The vibrators which clean the baghouses cycle automatically when pressure differential triggers them. Therefore, the operator does not need to observe the gauge or activate the equipment in order for the vibrators to cycle. As requested above the source requests that IDEM/OAM delete the requirement for visible emissions observation and notation.

Response 10:

Please, see Response 9.

Comment 11:

There is a typographical error in the TSD New Equipment Summary of Emissions' Table; and in the FESOP Sections D.4.10; D.4.12; and D.4.13.

Response 11:

The typographical error mentioned in the TSD and the FESOP was corrected in the final Significant FESOP Modification/ENSR.

Upon further review, IDEM, OAM made the following changes to the issued FESOP.

(1) In the past 326 IAC 6-3 allowables were truncated to a level of emissions that should not exceed the PSD, Emission Offset or the Title V threshold levels. It is now IDEM/OAM's position that all rules stand by themselves and that 326 IAC 6-3 only addresses hourly limit (short term limit) and not long term limits required under the PSD, Emission Offsets and Title V permit rules.

The issued FESOP reflects this situation where no separate limit for PM10 was included in order to comply with the 326 IAC 2-8 (FESOP). The condition under 326 IAC 6-3 PM allowables is the only condition in the issued FESOP that satisfies the limit under 326 IAC 2-8. Therefore, the issued FESOP is revised to include a separate condition that limits the PM10 emissions to 99 tons per year. To make this limit (99 tons/yr) federally enforceable, it has to be practical, it must be short term and specific so as to enable the OAM to determine compliance at any time. The following conditions are added in the issued FESOP and numbered as follows:

D.1.6 Particulate Matter Less Than Ten Microns (PM10)

The PM10 emissions from the CBS line, MIBA Lines #1 and #2 shall be limited to 9.6 pounds per hour. Compliance with this limit including the limit in Sections D.2.1, and the insignificant activities will make 326 IAC 2-7 (Part 70 Permit) not applicable.

D.2.1 Particulate Matter Less Than Ten Microns (PM10)

The PM10 emissions from the Cu/Pb Powder Line shall be limited to 4.2 pounds per hour. Compliance with this limit including the limit in Sections D.1.6, and the insignificant activities will make 326 IAC 2-7 (Part 70 Permit) not applicable.

All subsequent conditions are renumbered accordingly.